

29. (Amended) A combine for harvesting a crop due, in part, to the rotation of a rotor, the combine comprising:

an engine;

a hydraulic pump driven by the engine;

a hydraulic motor driven by the pump, wherein the motor drives the rotor; and

an electronic control circuit, wherein the electronic control circuit maintains a selected rotor speed by regulating the speed of the motor and wherein the electronic control circuit monitors the rotor speed and determines appropriate control signals to send to the variable displacement pump to maintain the selected rotor speed.

34. (Amended) The combine of Claim 29, wherein the variable displacement pump is controlled by changing the pump displacement.

35. (Amended) A combine for harvesting a crop, comprising:

an engine;

an electronically controlled variable displacement hydraulic pump driven by the engine;

a hydraulic motor driven by the hydraulic pump;

a rotor driven by the hydraulic motor; and

a control circuit that electronically controls the rotor speed by regulating the speed of the hydraulic motor via control of the variable displacement hydraulic pump and wherein the control circuit monitors the rotor speed and determines appropriate control signals to send to the variable displacement hydraulic pump to maintain a predetermined rotor speed.

39. (Amended) The combine of Claim 35, wherein the variable displacement pump is controlled by changing the pump displacement.